

**IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF TEXAS  
WACO DIVISION**

IMPULSE DOWNHOLE SOLUTIONS LTD.,

Plaintiff,

vs.

RUBICON OILFIELD INTERNATIONAL  
HOLDINGS LLC,

Defendant.

Civil Action No. 6:19-cv-378

JURY TRIAL DEMANDED

**COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff Impulse Downhole Solutions Ltd. (“Impulse”) files this Complaint For Patent Infringement against Defendant Rubicon Oilfield International Holdings LLC (“Rubicon”) and in support of this action allege:

**INTRODUCTION**

1. This action for damages and injunctive relief arises under the Patent Laws of the United States, 35 U.S.C. § 271, *et seq.*

**THE PARTIES**

2. Impulse Downhole Solutions Ltd. is a company organized and existing under the laws of the Province of Alberta, Canada, having a place of business at 5120 67th Avenue, Edmonton, AB T6B 3N9.

3. Upon information and belief, Defendant Rubicon is a Limited Liability Company organized and existing under the laws of Delaware with a principal place of business at 10613 West Sam Houston Parkway North, Suite 600, Houston, Texas 77064-4663. Rubicon may be

served with process by serving its registered agent: Capitol Services, Inc., 1675 S. State Street, Suite B, Dover, DE 19901.

### **JURISDICTION AND VENUE**

4. The Court has subject matter jurisdiction over this action pursuant to 28 U.S.C. §§ 1331 and 1338(a) because this action involves a claim arising under the patent laws of the United States, 35 U.S.C. § 1, et seq.

5. Personal jurisdiction and venue are proper in this Court pursuant to 28 U.S.C. §§ 1391, 1391, and/or 1400 because Rubicon has one or more regular and established place(s) of business in this state and district, including 4110 Interstate Highway 10 West Seguin, Texas 78155, 601 McDonald Street Odessa, Texas 79761, 651 McDonald Street Odessa, Texas 79761, and 5355 Dietrich Road #102 San Antonio, Texas 78219, and has committed acts of infringement in this district.

### **U.S. PATENT NO. 9,765,584**

6. On September 19, 2017, the United States Patent and Trademark Office issued U.S. Patent No. 9,765,584 (“the ’584 Patent”), entitled “Flow Controlling Downhole Tool” to Troy Lorenson, David Nicholson, and Petr Macek. A true and correct copy of the ’584 Patent is attached to the Complaint as Ex. A.

### **BACKGROUND**

7. Impulse was founded by a group of individuals who have focused their careers on designing, implementing, and improving new technologies in the oil field service sector. Impulse has been an innovator in the drilling and completions industry, creating an elite tool development team with 2 patents already granted and 24 more applications in various stages of process. Impulse has proven that its new technology is innovative and advantageously allows

companies to drill longer wells more efficiently. Since the onset of the technology outlined in this complaint, Impulse has maintained over a 50% market share in Canada and is growing rapidly in the US.

8. Impulse technology specializes in reducing friction in the well bore caused from drill pipe sliding on the bottom of the well bore. In particular, Impulse technology enables drill string vibrations in three dimensions to be used on an as-needed basis. These features are most beneficial for long wells where more than one tool needs to be deployed. This technology allows clients to “hide” multiple tools in the drill string and turn them on as the well advances in length.

9. Impulse’s innovative technologies include PowerPulse™, which is an axial vibration tool that is placed in the drill string and provides constant vibration that is activated as soon as a drilling rig’s pumps are engaged. PowerPulse™ provides many advantages for drilling operations, including an adjustable operating frequency, adjustable flow restriction to accommodate higher mud weights and flow rates, and lower operating pressure to provide increased efficiency.

10. Rubicon has infringed on Impulse’s valuable and proprietary intellectual property, including at least the ’584 patent. Rubicon is using Impulse’s patented technology without a license or Impulse’s permission.

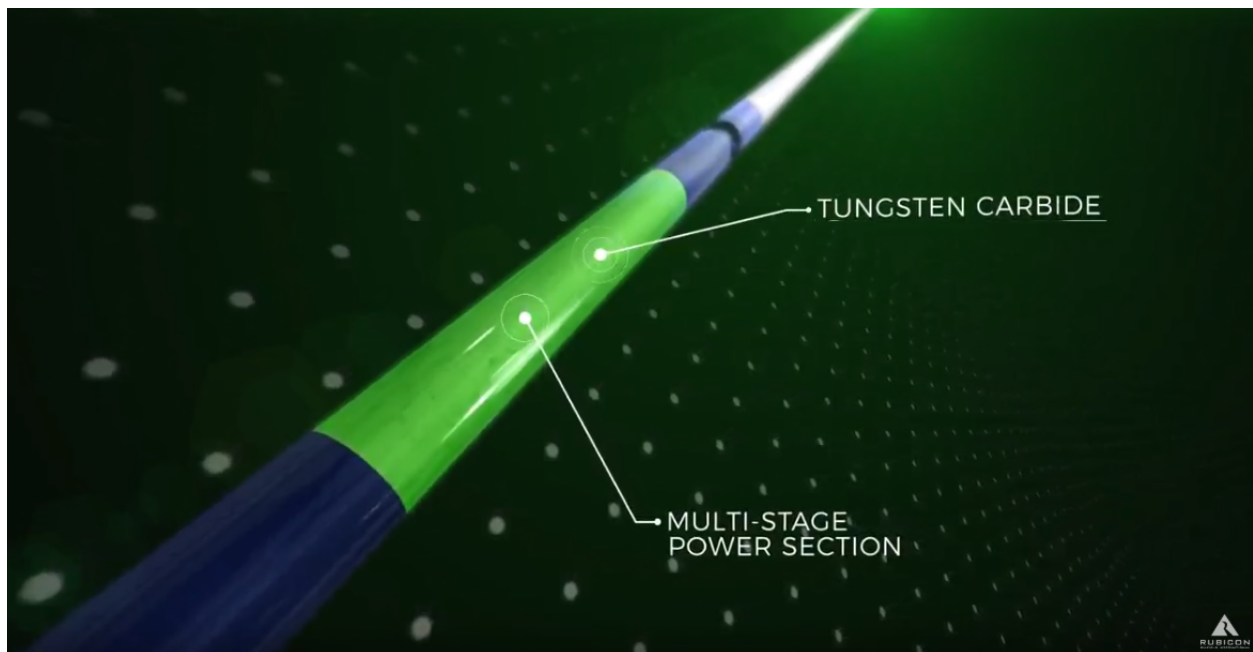
11. Rubicon manufactures, sells, and offers for sale products and services, including without limitation those marketed by Rubicon as the ResonatorX<sup>3</sup>, that infringe Impulse’s patented technology. The Rubicon products and services include a variety of components and each of the products, services, and their components are collectively referred to as the “Infringing Products.”

12. The Infringing Products provide a vibrational and/or percussive effect to improve the performance of downhole drilling. On information and belief, they do so by including a flow head with one or more ports that enter into and out of alignment with one or more ports of the flow restrictor such that the flow restrictor is constrained to a cyclic, polyrhythmic pattern.

13. In 2018 Rubicon began marketing and offering for sale a downhole vibration tool referred to as the ResonatorX<sup>3</sup>.



The ResonatorX<sup>3</sup> includes a motor, flow head, and flow restrictor. More specifically, it includes a multi-stage power section that drives a carbide hydraulic valve to create axial movement.



See Rubicon ResonATOR X3 video, RUBICON OILFIELD at 0:41 (available at

<https://www.youtube.com/watch?v=dLenOBD1Mfs>, last accessed May 3, 2019); see also

Resonator X3, RUBICON OILFIELD, <http://www.rubicon-oilfield.com/products/resonator-x3/> (showing a multi-stage power section connected to a valve)

14. The ResonatorX<sup>3</sup> uses “a rotating valve on the end just below the eccentric mass [to] create[] both lateral and axial movement.” Ex. B, PIS-ResonATOR-X3-2018-Mar.pdf, *see also* Ex. C Flyer-Resonator-X3-2018-Mar.pdf. The axial movement in the ResonatorX<sup>3</sup> is caused by the rotation of hydraulic valves. *See* Ex. D, ResonatorX3 Data Sheet (*available at* Data-Sheet-5-6-12-Inch-Tool-ResonATOR-X3.pdf) (“The lower end drive system drives a carbide hydraulic valve to generate pressure pulses to create axial movement.”) The device also uses an eccentric mass to create lateral movement, thus creating movement along the X, Y, and Z axes. *Id.*



*See* Ex. E, Still Image from ResonatorX<sup>3</sup> video (*available at* [http://www.rubicon-oilfield.com/wp-content/uploads/ROI\\_ResonATORX3\\_WebBanner\\_20181018.mp4](http://www.rubicon-oilfield.com/wp-content/uploads/ROI_ResonATORX3_WebBanner_20181018.mp4)). The image above is a still image from a video posted on the Rubicon home page. On information and belief, the image shows at least two valve holes in the flow restrictor corresponding to at least

two holes in the flow head. Upon information and belief, the use of these valves and ports to create axial movement results in a cyclic, polyrhythmic pattern. *See* Ex. D (“The multiple frequency eliminates interference with critical LWD and MWD equipment.”)

**COUNT 1**

**(INFRINGEMENT OF THE '584 PATENT)**

15. Impulse incorporates by reference the allegations contained in paragraphs 1–14.

16. The '584 patent is valid and enforceable.

17. Impulse is the sole holder of the entire right, title and interest in the '584 Patent.

18. Rubicon has directly infringed and continues to directly infringe the '584 patent, both literally and under the doctrine of equivalents by making, using, selling, and/or offering to sell products that embody the inventions disclosed in the '584 patent, including downhole drilling solutions designed to reduce friction, including Rubicon's ResonatorX<sup>3</sup> products and related services. By way of example and not limitation, the Infringing products infringe claim 1 of the '584 patent.

19. Rubicon has indirectly infringed and continues to indirectly infringe the '584 patent with knowledge that its actions constitute infringement of the '584 patent, at least as of the filing of this Complaint. Rubicon has induced and continues to induce infringement of the '584 patent by providing information and instruction on using the Accused products in an infringing manner, evidenced at least by the marketing and sales materials provided to its customers and potential customers through its website and its other marketing activities, including demonstrations and materials provided during traveling road shows. *See Rubicon Oilfield International Brings Road Show*, MRT (March 23, 2018), <https://www.mrt.com/business/oil/article/Rubicon-Oilfield-International-brings-road-show->

12783429.php#photo-15292514. Rubicon contributes to infringement of the '584 patent by others by manufacturing, marketing, and selling the ResonatorX<sup>3</sup> products, which are especially made for infringing use, with the knowledge that such use is infringing, and with the knowledge that these products are put to such infringing uses. As recently as April 2018, Rubicon stated that the ResonatorX<sup>3</sup> has been used in “over 290 successful deployments in 7 Major US Basins, drilling 1,000,000 plus [feet].” Rubicon Oilfield (@rubiconoilfield), INSTAGRAM, <https://www.instagram.com/p/BwstkSjlJfF/> (last visited April 25, 2018). The ResonatorX<sup>3</sup> has no substantial non-infringing uses.

20. Rubicon has known of the '584 Patent since at least the filing of this complaint and has nevertheless continued to infringe. Accordingly, Rubicon's infringement has been willful.

21. As a result of infringement of the '584 Patent, Impulse is suffering irreparable harm for which it has no adequate remedy at law. Unless enjoined by this Court, this infringement will continue and will result in further irreparable harm to Impulse.

22. Impulse is entitled to recover damages from Rubicon not less than a reasonable royalty adequate to compensate for the infringement. In the alternative, Impulse is entitled to recover damages from Rubicon not less than the profits lost by Impulse due to Rubicon's unlawful behavior.

23. Rubicon's unlawful actions have caused, and will continue to cause, Impulse irreparable harm to its business and reputation unless enjoined.

### **DEMAND FOR JURY TRIAL**

Impulse demands trial by jury of all issues triable of right by a jury.

**PRAYER FOR RELIEF**

WHEREFORE, Impulse asks this Court to enter judgment in its favor against Rubicon and grant the following relief:

- A. Judgment that the '584 Patent is valid, enforceable, and infringed by Rubicon;
- B. An award of damages arising out of each of Rubicon's acts of patent infringement, together with pre-judgment and post-judgment interest, sufficient to compensate Impulse for Rubicon's infringement of the Asserted Patents;
- C. Judgment that the damages so adjudged be trebled in accordance with 35 U.S.C. § 284;
- D. Declaring this case exceptional and awarding to Impulse its attorneys' fees and costs incurred in this action, pursuant to 35 U.S.C. § 285; and
- E. Granting Impulse such other, further and different relief as the Court may deem just and proper.

Dated: June 17, 2019

By: /s/ John M. Guaragna  
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